DOCUMENT RESUME

ED 429 875 SO 029 434

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TITLE The Significance of Theoretical Training for Critical Thinking.
PUB DATE 1997-00-00
NOTE 14p.; Paper presented at the Annual Meeting of the American Psychological Association (105th, Chicago, IL, August 15-19, 1997).
PUB TYPE Opinion Papers (120) -- Speeches/Meeting Papers (150)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Critical Thinking; Higher Education; Information Dissemination; *Psychology; Scientific Methodology; *Teacher Role; Teaching Methods
IDENTIFIERS *Faculty Attitudes; Theoretical Orientation

ABSTRACT

The ability to think critically is one of the few teaching goals that seems to cut across the various factions of contemporary university culture. Critical thinking provides students with the ability to learn and evaluate the content of each discipline. Evaluation skills offer two benefits: (1) students understand the discipline at a greater depth; and (2) students are more creative. Psychology endorses the importance of critical thinking. Noting that psychology is one of the many disciplines to endorse the importance of critical thinking, this paper considers how well academic psychologists actually facilitate critical thinking in their undergraduate and graduate students. The paper offers a true experience that suggests psychologists have a long way to go before reaching "critical thinking nirvana." It recounts what happened in a "Teaching Psychology" graduate course when various visiting faculty members discoursed on how to teach discipline. The critical thinking issue was completely overlooked by the 17 faculty lecturers. According to the paper, information distribution was emphasized by the majority of the presenters. The only lecturer to mention critical thinking in his presentation felt that the key to critical thinking is the skill to question and evaluate the information itself. In addition, one group of presenters taught scientific method as critical thinking. The paper contends that critical thinking should involve skills in evaluating all the information, including the process being advocated to do the evaluating. The paper suggests that the discipline of psychology, which views science as proceeding without the need of intellectual history, has not laid down the theoretical groundwork necessary to facilitate critical thinking. For this and other reasons, the paper proposes a new subdiscipline of theoretical psychology. (BT)

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The Significance of Theoretical Training for Critical Thinking.

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The Significance of Theoretical Training for Critical Thinking

Presented at the 1997 APA Convention, Chicago, Illinois

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For many years, educators have hailed critical thinking as the "Holy Grail" of higher learning. Indeed, the ability to think critically is one of the few teaching goals that seems to cut across the various factions of contemporary university culture. This is because critical thinking is thought to provide students a perspective that allows them not only to learn the content of each discipline but also to evaluate that content. Such evaluation skills have at least two essential benefits: 1) students understand the discipline at a greater depth, because they know the strengths and weaknesses of the various ideas of the discipline, and 2) students evidence more creativity and productivity, because they know alternatives from which to compare and evaluate traditional disciplinary ideas.

Psychology is, of course, one of the many disciplines to endorse the importance of critical thinking. Although there has been no formal edict on this issue from the APA or APS "powers on high," psychology has long been viewed as supportive of the critical thinking movement, if not on its vanguard in terms of its research and ideas. How well academic psychologists actually facilitate critical thinking in their undergraduate and graduate students is quite another matter. No formal empirical studies have been conducted on the efficacy of such facilitation, as far as I am aware. However, I would offer a true, and I believe telling, experience that suggests psychologists have a ways to go before we have reached

critical thinking nirvana. Please forgive the length of my story, but I believe it illustrates several important aspects of facilitating critical thinking in psychology.

The Story

To protect identities somewhat—because they are irrelevant to the point of my story—I will say only that the setting for this story is one of the five universities at which I have taught. I was teaching, at the time, a "Teaching Psychology" class to a group of graduate students. I had invited the entire faculty of our department to present individually to the class how it is that they teach, particularly what they felt made them effective teachers. I scheduled them for 15 to 20 minute segments, and they were encouraged to bring teaching materials, such as course syllabi and class handouts.

Now in order to "warm" my students to the issues of teaching, and to make the faculty presentations more meaningful, we began reading and discussing two mainstream texts on teaching psychology. As you might guess, both of these texts made a big to-do about teaching critical thinking. They were a bit vague on how one actually went about this task, but they were quite clear about its importance to students and to the discipline of psychology generally. My students, for the most part, enthusiastically agreed with this importance.

Our first faculty member was one of the most energetic of the department. In her 20 minute presentation, she dazzled my students with her teaching style and teaching strategies. She brought with her samples of the information she distributed as well as an incredible multi-media

exhibition of the various materials and techniques she used. It was impressive. After she left, our discussion was as energized as her presentation. How did this professor do all this? What energy she must have! We all agreed that she surely had to be our model teacher, even though she was only the first of many faculty to present.

Then someone asked an intriguing question: How did she teach critical thinking? An interesting silence ensued, because none of us could remember her explicitly mentioning this as a course objective. No matter. Her course was too impressive and her teaching was too good to overlook this important goal, so we pored over the many syllabi, exercises, and course objectives she had left with us. To our surprise, we could find no evidence of critical thinking anywhere. She clearly distributed an amazing amount of course information, and she excelled in the ways in which she asked her students to apply this information. Nevertheless, as far as we could tell, she did not help her students to think critically about the information or its application. All of a sudden, our ideal teacher was not so idealized.

We were also struck by how easily the critical thinking issue was overlooked—both by the faculty presenters and by us. We speculated about her training of graduate students for clinical work. Surely, she taught them critical thinking skills. But then, why would she not have hinted at such critical thinking at the undergraduate level? Was it possible that she focused on information and application at the graduate level as well? Why had we not questioned her about this at the time? The class began to think back on the undergraduate and graduate courses that they had all taken.

Very few could remember any expressed critical thinking component in the classes they had taken. They could recall a few spontaneous discussions that would have probably fit the description, but even these seemed to take place more by default than by design. My students concluded, rightly or wrongly, that they were not sensitive to the issue of critical thinking, because they had not been sensitized to critical thinking in their classes.

Needless to say, however, my students were sensitized now. Every faculty member who subsequently presented was queried quite thoroughly on the issue. Interestingly, only one of these 17 faculty members mentioned something even remotely related to critical thinking in their initial presentations. Moreover, the materials offered, such as teaching objectives and instructional goals, revealed no evidence of critical thinking exercises or critical thinking course materials. However, when each of the faculty were questioned about the issue, every one of them described how much they valued critical thinking and how much they facilitated it in their courses. When asked how this facilitation was accomplished, the answers were themselves quite fascinating to the class, and seemed to fall into three distinct categories.

The vast majority of the presenters appeared to fall into the "information distribution" category. That is, a large number of these faculty assumed that the mere distribution of information—facts, theories, techniques—facilitated critical thinking. In other words, if their students had successfully memorized this information, they were viewed, ipso facto, as more sophisticated consumers of psychological information. The thinking was that there was nothing like knowledge, particularly facts, to

cut through the myths and misunderstandings of psychology and the "pop" psychology of our culture.

The next most-endorsed answer to the question of how the presenters taught critical thinking was the use of scientific method. These faculty believed that the mere distribution of facts is insufficient. After all, I remember one saying, the facts can themselves change as new data are assimilated. No, the best way to facilitate critical thinking—indeed, the actual teaching of critical thinking itself—is the teaching of scientific method. In other words, critical thinking was assumed to be synonymous with rationality and rationality was epitomized in scientific method. The masters of scientific method are the masters of critical thinking. Critical thinkers are those who follow the rules of science—such as generating testable hypotheses, controlling extraneous variables, and subjecting data to rigorous analysis.

The final category of how faculty taught critical thinking included only one presenter—the only one to mention the import of critical thinking in his initial presentation. This lone faculty member agreed with the first category of presenters about the importance of information to critical thinking. However, he denied the sufficiency of information, including information about the scientific method. Indeed, the key to critical thinking for him is the skill to question and evaluate the information itself, including any information, such as a method, that is used to evaluate the information. To have this skill, he contended that students should be exposed to the assumptions of all this information and to alternate assumptions in which to contrast mainstream assumptions. Only then,

can students begin to see the intellectual roots of the information being purveyed, and have alternative conceptual locations in which to evaluate and critique these roots.

The Lessons

Now, those of you who know me or my work must know that I steered my students to the lone faculty presenter's notions of critical thinking. Indeed, I recently co-authored a book with Richard Williams entitled, What's Behind the Research? Discovering Hidden Assumptions in the Behavioral Sciences. Still, it was obvious to me at the time, as it is now, that considerable theoretical work needs to be done—just on the definition of critical thinking, let alone the development of critical thinking strategies and teaching techniques. What about the other approaches to critical thinking? Is, for example, the mere distribution of information sufficient to satisfy those in the critical thinking movement? A review of this literature has convinced me that the answer is clearly "no." In fact, one of the prime reasons to single out the notion of critical thinking and critical evaluative skills is to differentiate them from mere information distribution and application.

How, then, do I explain my colleagues who advocated this approach to teaching critical thinking? Were they merely defensive? After all, they were getting questions about critical thinking that they had probably never fielded before. Somehow, though, I doubt that their position was merely defensive. I believe, especially after questioning them further, that many of them honestly felt that getting students the facts of psychology made them more critical thinkers. In fact, all these faculty were critical of something

in their courses—most often some type of perceived misinformation. It's just that they believed that the further infusion of information was the best way to correct this misinformation. The problem is that this "further infusion" is not itself a skill or an ability to think critically. Indeed, in some sense, it is anti-critical thinking, because it uses the authority of the instructor (or science) to trump one piece of information with another, without the student's gaining any real skill to evaluate either.

What about the group of presenters who taught scientific method as critical thinking? This group is much more difficult to dismiss, because many in the critical thinking literature hold to a similar thesis. Mayer and Goodchild (1990), for example, define critical thinking as "an active and systematic attempt to understand and validate arguments" (p. 4). Gray (1991), as another example, defines critical thinking as the "reasoning we do in order to determine whether a claim is true" (p. 1). In these cases, it is not difficult to see why scientific method would be connected to this understanding of critical thinking. Scientific method is itself our discipline's premier approach to validating arguments and determining truth claims. Indeed, for many psychologists, the scientific method is the epitome of good, rational, and careful thinking.

Unfortunately, however, this understanding of critical thinking equates it with reason. I say "unfortunately," because the questioning of assumptions is often omitted in such understandings. That is, a student might learn how to extend and even test an argument through reason—this, of course, is the logic of science. However, this does not mean that the students have learned how to question and evaluate the assumptions of the

reasoning itself. In my Teaching Psychology course, for instance, it was apparent that none of the presenters who used scientific method to teach critical thinking ever allowed or promoted the questioning and evaluation of the method itself. Science was the unquestioned given. Even by the definitions I just quoted, students should be encouraged and educated, using Mayer and Goodchild's own phrasing, to "understand and validate" the arguments of scientific method itself. That is, critical thinking should involve skills in evaluating all the information, including the process being advocated to do the evaluating.

What Can We Do?

I side with Beyer (1988), Zeidler (1992), and others in this literature who favor distinguishing critical thinking from thinking in general. As Zeidler (1992) sums up this literature, "Critical thinking is sometimes generically used as an umbrella term to include all thinking operations" (p. 438). Zeidler (1992) favors, instead, a return to Dewey's original notion of critical thinking, from his 1933 book entitled How We Think. Dewey's notion of critical thinking is perhaps best summed up in a quote from this book: "Active, persistent, and careful consideration of a belief or supposed form of knowledge in the light of the grounds that support it and the further conclusion to which it ends" (p. 9). In other words, critical thinking entails an understanding of the assumptions and implications of ideas—including the ideas of reason and method.

This definition of critical thinking would encourage an examination and evaluation of the "givens" of psychology, such as scientific method. Of course, such givens can rarely themselves be examined scientifically;

scientific method, for example, would have a bootstrap problem in examining itself. No, the givens of psychology would normally be subjected to some sort of theoretical and philosophical analysis. Now what I mean by "theoretical and philosophical analysis" is itself an interesting can of worms. For instance, if scientific method is, in fact, the epitome of rationality in the Western world, then to examine the givenness of rationality is to have some other means of conducting this examination.

Needless to say, such an examination would be a difficult and complex task. Still, it would be a mistake to assume that it is an impossible one. Several thinkers have shown us that it can be done—in interesting and illuminating ways (e.g., Bernstein, 19xx; Feyerabend, 19xx; Gadamer, 19xx; Heidegger, 19xx; Kuhn, 19xx). Moreover, such a task must be done. Otherwise, the examination of givens—which critical thinking depends upon—is itself impossible. Indeed, any critique of thinking or reasoning, including psychology's own forays into cognition and problem-solving, would be impossible, and this is simply not the case.

Why, then, has psychology undertaken so little of this task in regard to its own givens? Were the faculty presenters and their neglect of disciplinary givens really that unrepresentative of psychologists, and psychology training as a whole? All these men and women firmly believed in the importance of critical thinking, yet few had really done the critical work necessary to facilitate student evaluation of the information they were distributing. Few had probed deeply enough into their subject matter to discover its implicit assumptions. Few had done the scholarly research required to offer contrasting assumptions. And finally, few had endeavored

to follow these assumptions to their ultimate theoretical implications and practical ramifications. That is, the logical extensions of their own ideas were, for the most part, unknown to them. As Dewey said, we must also track the "further conclusions to which [an idea] ends," because all ideas have serious consequences.

Why were my colleagues so unprepared to educate their students about the givens of their discipline, let alone educate them on how to question and evaluate such givens? I believe that our anti-intellectual history has something to do with this. This is not to say that our founding fathers were anti-intellectual, but a certain kind of scientism and pragmatism has dominated psychology's recent history, such that many psychologists have not been trained to plumb the intellectual depths of their disciplines. They are too busy designing the next empirical investigation or formulating the next clinical technique. Science is viewed as proceeding without the need of intellectual history, and certainly no one is thought to need such a history when helping people with their difficulties.

The problem is that this view has not allowed us, as a discipline, to lay the theoretical groundwork necessary to facilitate critical thinking, both among ourselves as professionals and among our students. Because of our history, few psychologists are trained or motivated to provide this groundwork. However, this groundwork is still necessary if we are to have students who can meet the future intellectual challenges of the discipline. Without this groundwork and without some psychologists who have the inclination and the education to expose the givens and implications of disciplinary ideas, the many benefits of critical thinking will not accrue.

Indeed, I believe we are already seeing the loss of the benefits I mentioned at the outset of my presentation, namely, little depth of understanding psychological ideas and little creativity regarding future disciplinary challenges.

This is just one of several compelling reasons that I and others have proposed a new subdiscipline of theoretical psychology. As Richard Williams and I outlined in a recent American Psychologist article, the tasks necessary to truly facilitate critical thinking would be part of the disciplinary role of the theoretical psychologist. That is, we do not need more and better data to facilitate critical thinking; we need a clearer and deeper understanding of our psychological theories, techniques, and methods. We need, as Dewey made so evident, a thorough explication of the givens of psychology as well as the implications of where the givens are leading us. Without this kind of groundwork, no one can critically evaluate our psychological ideas, let alone teach students how to do so.

I am not naive enough to think that this proposal or the need for critical thinking skills will turn psychology from its current pragmatism and scientism. Still, a subdiscipline of theoretical psychologists could ensure that the groundwork for critical thinking would be continually available and that a critical discourse on the givens and trends of the wider discipline would be kept alive. This is not to say that the facilitation of critical thinking would be the exclusive province of theoretical psychologists. Rather, some sort of critical thinking should be incorporated in every course, by everyone. The main job of the theoretical psychologist would be to see that such thinking is championed and to help others who

may not be so inclined or trained to incorporate critical thinking content and strategies into their courses. Without such a subdiscipline, I fear the insensitivity to critical thinking that was illustrated in my story will be representative of psychology, not only in the present but also in the future.